

1846

Art mil. Marine  
N<sup>o</sup> 2

**MEMORANDA**

**ON THE DEFENCE**

**OF**

**POSTS.**

**BY**

**GENERAL**

**SIR JOHN FOX BURGOYNE BART. G. C. B.**

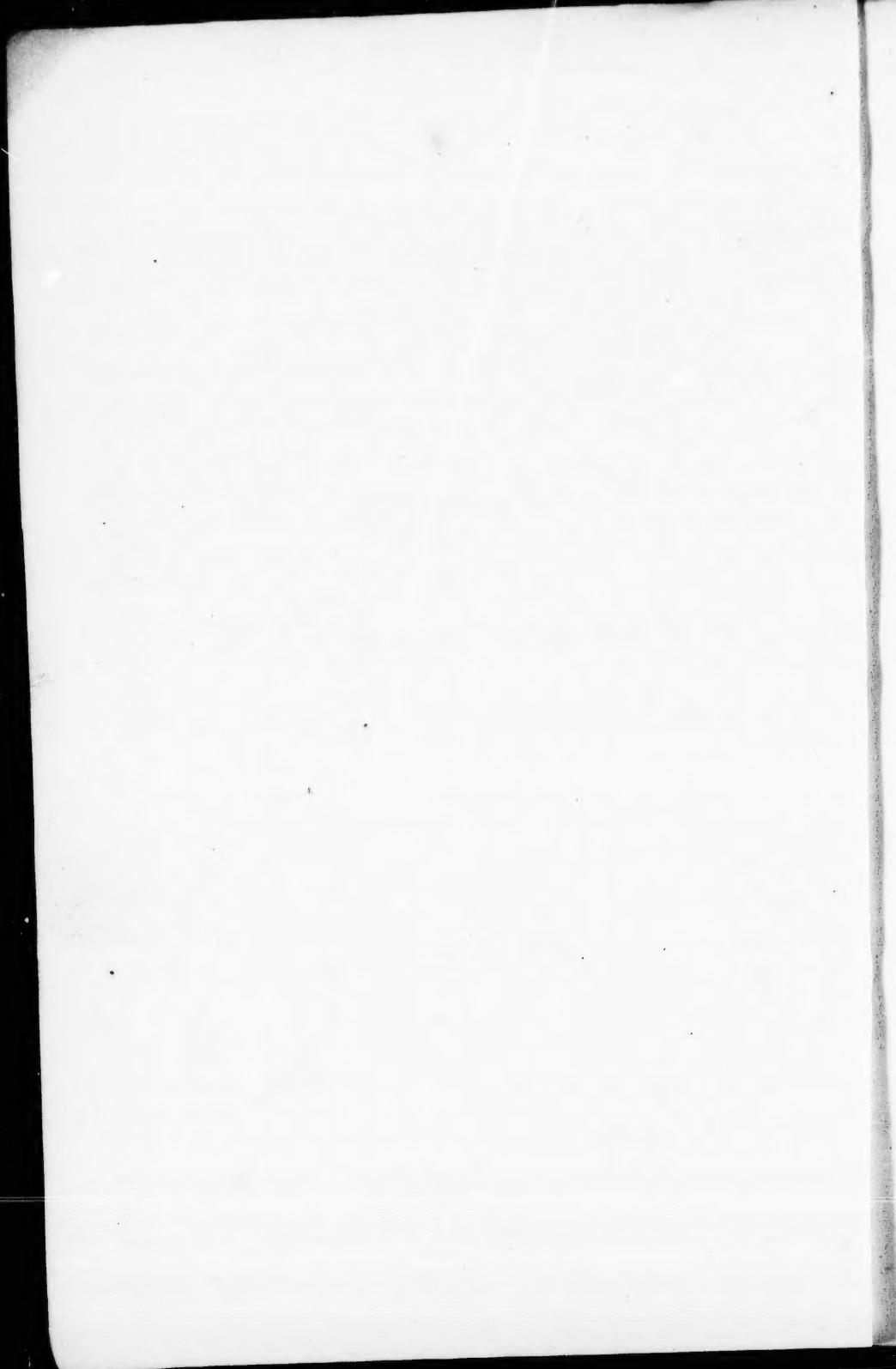
**INSPECTOR GENERAL**

**OF**

**FORTIFICATIONS.**

---

**1857.**



## ON THE DEFENCE OF POSTS.

A few Mem.<sup>a</sup> on the rapid preparation of Posts for defence, to resist a coup de main, and where Artillery is not likely to be brought against them.

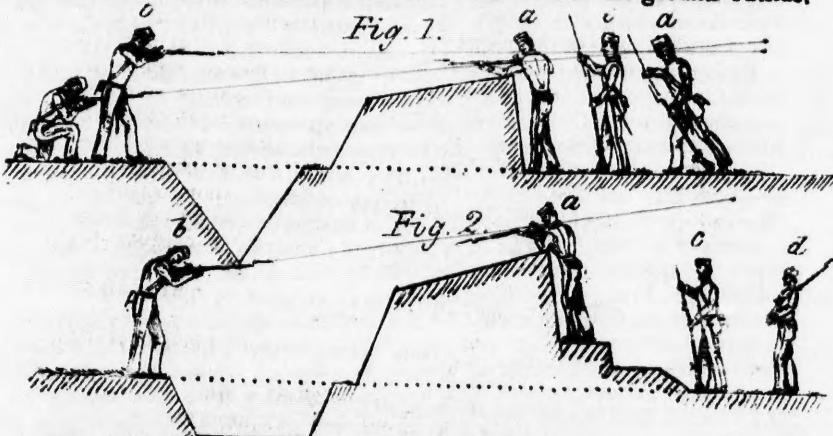
A post to be defensive against superior numbers, or to give the defenders every possible advantage against an attack, should be provided with the following requisites, in the greatest degree that can be obtained.

1. Cover for the men, to protect them from the enemy's fire.
2. Obstacles, to impede his approach.
3. A sweeping fire in all directions, over every part of the fronts by which his attack can be made.

These in fact are the principles sought for in every kind of fortification, against an assault.

1. THE COVER may be by walls, either in buildings or distinct, by timber barricades, by earth, or by any other matter of sufficient thickness to resist musket shot. To be complete, it should cover the whole person of the defender, excepting a very small opening, as a hole or slit, (called loopholes) for the barrel of his own musket to be passed through:—An ordinary breastwork only gives cover up to the man's chest, all above being exposed, leaving in a contest, room for many casualties, and also, by its manifest partial exposure, preventing the fire from it, being so steady and well levelled, as when the defender feels himself to be more completely protected; but even in breastworks, this inconvenience may be greatly remedied by forming loopholes, of logs of wood, bags, boxes, or barrels, filled with earth &c.

The cover should be so high, as not only to protect the men who are close to it, but every part of those who may be in the rear:—this will be the case if it is higher than the shoulders of the men standing on the ground outside. In Fig. 1 not only is the man A, behind the breastwork, exposed to the fire of the enemy B, but also those in the rear at C D; not so in Figure 2, where the covering mass is raised, the breastwork therefore should be, on this account, not less than 6 feet above the level of the ground outside.



Where the enemy may possibly approach close to the cover, as in the case of buildings, walls or stockades, that are without ditches, the loopholes should be so high that he cannot pass his musket into them; otherwise, he may fire as advantageously into the interior, as the defender to the exterior, therefore the bottom of the loophole should not be less than 6 feet above the level of the ground outside; the defenders to have this additional elevation can stand on some raised step, suited in height to the height of the loophole.

2. OBSTACLES must be under the fire of the defenders or they will be of no use, and should be what may be most difficult for the enemy to pass what will afford him no cover, or the slightest possible, and it is better if not exceeding 40 or 50 yards from the defender's fire.

That obstacle is most effective that requires the most time and labour to pass, and more particularly if peculiar implements are necessary, such as ladders, or hatchets or crowbars &c., because where the unaided effort of the men only is called for, whoever may reach the obstacle can at once proceed to effect an opening whereas the required implements may not be forthcoming on the spot, and then the attacking party will be in that most distressing circumstance of being under fire without a power of advancing.

The obstacles should be powerful, thus moderate palings, slight quick set hedges, and others that are considered adequate in ordinary life against encroachment, would prove no barrier against bodies of men in war conflicts.

Of all obstacles those that are natural are the best, such as precipices, water that is too deep to wade through, or bad morasses—of those that are found ready made, buildings and walls may become the most efficient, with the smallest labour, only requiring all the lower gates, doors, windows, or openings to be well barricaded ; and when so secured, to break into them under fire and without Artillery is rarely accomplished.

Many are the contrivances for obstacles, that may be prepared at the time, according to the means afforded by the locality ; very steep places may perhaps be made precipitous ;—deep cuts or holes may be made in shallow water ; or wet ditches may be excavated. There may be applied also Palissades and Fraises, Abbatis, Chevaux de frise, planks studded with spikes, Trou de loup, dry ditches, Fires, Fougasses, &c., &c., &c., each having different conveniences and inconveniences.

Palissades are of little value unless they are very substantial, such as the trunks of young trees or strong logs, they require to be very firmly fixed in the ground ; slighter palissadings are easily forced by large bodies of men under excitement ; they require also to be flanked, that is to have their Exterior sides exposed to the fire from the Post, otherwise, they will afford much cover to the assailants.

Fraises, (palissades projecting almost horizontally from the front of the work) may be slighter but are more troublesome to fix.

Abbatis are felled trees, with their branches outside, and pointed, laid contiguously in a line ; to be effective the trees should be large, and then it is extremely laborious to collect and arrange them ; they also should be flanked. All these require considerable labour, and some time to prepare in any quantity, but may be useful to apply to small spaces or gaps.

Small wood and brushwood of briars and quickset hedges may be made into a very troublesome obstacle, by cutting the stems half through, inclining and interlacing them together.

Chevaux de frise can hardly be considered an obstacle against Infantry, because they are so easily removed ;—dry ditches in EARTH, without other addition, are scarcely an obstacle, for though when first formed, they may appear difficult to pass, they are in a constant state of deterioration, and even at best become very rapidly of easy access under the efforts of bodies of men.

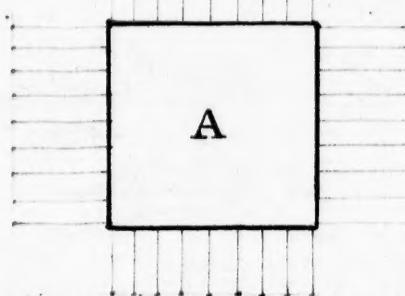
A line of burning materials of any width, is impassable by troops, but it must be of limited duration, and the smoke may obstruct inconveniently the view.

Fougasses or small mines lodged just under the surface of the ground are a powerful accessory in defence, more by their intimidating, than real

effect; but they and their trains are very difficult to prepare, so as to be secured from damp; and such refined apparatus as Galvanic action for firing, cannot be expected to be applicable on such occasions.

It is impolitic to apply slight obstacles, or such as can be easily overcome, as the morale of the defenders will suffer at the failure of that on which they may have relied.

3. A judicious arrangement of the direction of the fire from the post, is of first rate importance for increasing its power of resistance. Opening loopholes along the faces of a building, for instance, is the most simple but the least effective.

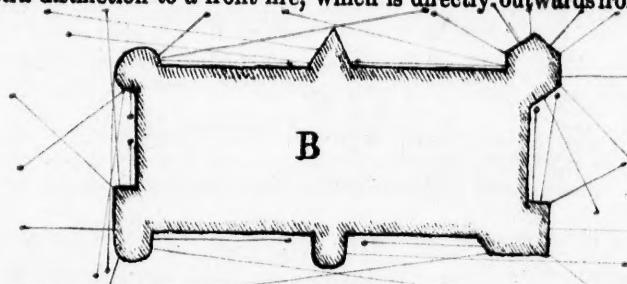


Suppose a square or oblong building A so prepared, the fire from it will be as shown by the red lines, which will require a very considerable number of men, to be able to maintain it in active force, and which even then will be slack at parts; it will be observed also that the large spaces at the angles are altogether free and unprotected.

If the loopholes also are raised above the level of the ground not less than 6 feet, as before shown to be desirable, the assailants when close will be under cover.

But let a building of a similar class have a capability of being flanked; and its strength will be very much greater, even when occupied by a much smaller number of men.

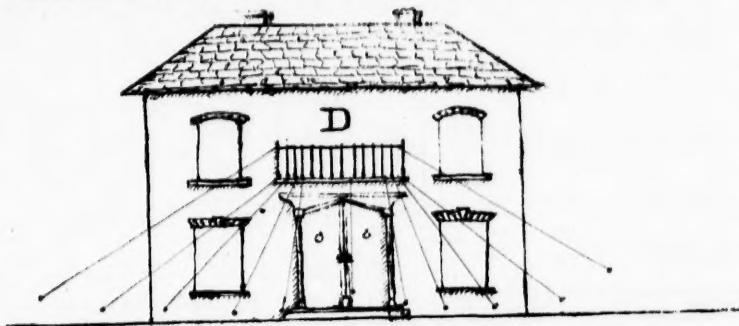
A flanking fire is what ranges along the face of the line to be protected, in contra distinction to a front fire, which is directly outwards from it.



A building as B with towers or projections at the angles, or on the faces, has ready made flanks, from which, as shown by the red lines, the fire of a few men would cover the whole space all around it, which will serve as the main self protecting power, and which will not prevent the opening of any number of loopholes to bear directly on the exterior, and on the approach of the enemy.

As the flank is so influential and is usually small, every effort must be made to increase its power;—where there is sufficient height, the loopholes may be in tiers, one above another, and every loophole may be given more effect by multiplying the number of men at it: thus a rapid uninterrupted fire may be maintained from a single loophole by having three or four men to load for the one who is firing.

Angular turrets are not frequently met with, but any projections on the face of the building will answer the purpose, such as, porches, or bay windows, or balconies, by closing their fronts by some substance that is musket shot proof, and making openings on the sides or flanks, and in the case of a projecting balcony in its floor also, to fire down; (the latter being called technically machicolis), by means of this it will be perceived that the whole face of the building may be protected from that one point.



D. balcony covered from front by thick plank, or other musket proof facing, and with openings on the sides and floor.

A balcony, even such as has only projection enough to hold flower pots, may be made an excellent flank, by lining the front with thick planking or other musket proof substance, for the height that would cover a man who stands upon the floor of the room, between 2 and 3 feet would usually be ample, and by leaving openings on the sides and bottom to fire through.

For this kind of position a pistol would be even a more handy weapon than a musket.

Every side and every angle that can be reached by the enemy, should be thus put under a flanking fire.

Every door, lower window, or other part which though closed and barricaded may be weaker than the rest of the enclosure, or which at all events would be the mark peculiarly aimed at by the assailants for forcing, should be particularly under fire, and well watched.

Premises for defence should be detached, and the greater and more exposed the open space around them, the better. A building attached to others that are not included in the arrangement, will manifestly be more difficult to protect.

The first point to be attended to will be to barricade powerfully all doors and windows that are on the basement or ground floor.

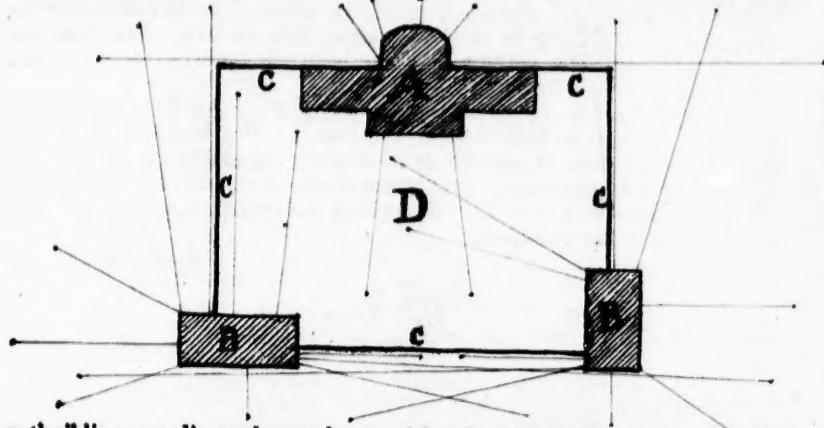
It may probably be necessary to have one opening left available for a communication in or out; if so that one will be on the part most protected and most difficult for the enemy, to approach, and its opening and shutting will be as secure as possible, which is best managed by double doors, or other mode of making the interior within the outer door defensible.

Where the door or gate of a post can be approached undiscovered, and an immediate attack is threatened or apprehended, it may be useful to

maintain a casual fire blindly all through the night, from any flank bearing on it, on the chance of keeping the enemy off; instances are on record of men being in the morning found by this proceeding killed near the gate, with petards in their hands.

Buildings very strongly constructed, isolated from others, such as old castles, churches, and substantial public edifices, are most readily made defensible; flat roofs, if not commanded from other ground or buildings are advantageous, that they should be little susceptible of catching fire is of great importance. A building that is thatched, or that contains a great deal of Hay, Straw, or other combustible, may generally be considered indefensible.

Outbuildings may sometimes be turned to valuable account, if they can be barricaded, and made to afford mutual defence to one another; in this way they may protect some important interior space and premises, thus, suppose A to be the main building prepared for defence B. B. to be



outbuildings, so disposed as to be capable of giving a flank defence to the enclosure walls C. C. the entire space D, may be thus secured, for not only will the fire from A. B. B. make the approach to the attack difficult, but it may perhaps in a great degree, if not entirely, be made to range over the whole interior of D. In such a post as this, the communications to the exterior would not be directly out from A. B. B. but first into D. and thence out.

Even after the lower or ground floor of a building has been forced or abandoned, the upper range has frequently been defended with success, by firing through openings in the floors.

If a post is in advance of a position, from which it may obtain support, or to which the defenders may have to retreat; for instance, if it is in front of an army; or on a shore, with the possibility of communicating by boats with shipping in the offing; the openings must be in the rear, and those communications must be made as secure from attack, or at least from view as possible.

All the communications in the interior, from one part of a post to the other, should be made clear; thus suppose two or three contiguous buildings to be occupied for defence, openings must be broken through in the interior for ready inter-communication as a whole.

It must be borne in mind, that an ordinary door, or gate, even of the strongest, is by no means musket shot proof; and while efforts are made to force it, the defenders by firing through, will probably kill or disable any of the assailants who may be behind it.

Doors and window shutters to be proof against close musketry (where there is time to make them so) should be at least 4 inches thick of timber, or if less thick, be lined with iron plates. At times however, the slightest screen from view may be useful, thus even a curtain across windows will prevent the defenders being seen from without, and consequently it will be unknown to the assailants, when they are behind the openings, where they will take care not to be habitually.

It is not necessary that the musketry proof protection to the windows, particularly of the upper floors, should close them entirely, if to a height of 6 feet above the floor of the room, it will be sufficient, or they may answer at even less, by adopting a stooping posture in approaching them.

Posts for defence, not having a very free communication with reserve forces, should be provided with such provisions, as will surely be ample for the occasion:—under any circumstances however, they should have plenty of water, not only for drinking, but also to extinguish fires, for which latter every available precaution should be taken:—An ample supply of ammunition should also be in the premises, duly husbanded, and as well secured as is possible, many a post has been lost for want of these, and other such precautionary measures.

The attacking forces may be in possession of Field Artillery and yet not be <sup>able</sup> to bring it to bear:—such as when the Post attacked is closely covered by the form of ground or otherwise, in a manner to prevent the bearing of the cannon on it, except from a very short distance, which may not be possible, either from the effect of any collateral fire, or from the close musketry from the post itself.

J. F. B.

where  
imber,  
ghtest  
s will  
will be  
where

dows,  
height  
y may  
hem.  
eserve  
ole for  
plenty  
which  
ly of  
well  
and

t not  
osely  
t the  
may  
close